AMENDMENT UNDER 37 C.F.R. § 1.111 Attorney Docket No.: Q91406

Application No.: 10/558,389

**REMARKS** 

Claim 5 has been amended to incorporate the subject matter of claim 6 and to specify the content of the modified natural rubber in component in the rubber composition. Additional support for amended Claim 5 can be found at for example paragraph [0051]. Claim 7 has been amended to correct its dependency. Claim 6 has been canceled. Upon entry of this Amendment, which is respectfully requested, Claims 1-5 and 7-31 will be pending, of which Claims 1-4 and 9-31 are withdrawn from consideration.

Response to Claim Rejections Under § 103

Claims 5-8 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0122134 to Weydert et al. Applicants respectfully traverse.

The present claims are directed to a rubber composition comprising a modified natural rubber, which is obtained by graft-polymerizing natural rubber latex with a polar group-containing monomer and then coagulating and drying, and carbon black and/or silica, wherein a grafting ratio of the polar group-containing monomer is 0.01-5.0% by mass per the natural rubber latex, and a content of the modified natural rubber component of the rubber composition is at least 15% by mass.

Weydert discloses a rubber component comprising a rubber gel, wherein the rubber gel is defined as a polybutadiene gel, styrene butadiene gel, acrylonitrile-butadiene gel, chloroprene gel and natural rubber gel. *See*, paragraph [0014]. However, Weydert does not disclose or suggest that the grafting ratio of the polar group-containing monomer is 0.01-5.0% by mass per the

8

AMENDMENT UNDER 37 C.F.R. § 1.111 Attorney Docket No.: Q91406

Application No.: 10/558,389

natural rubber latex and the content of the modified natural rubber in the rubber component of the rubber composition is at least 15% by mass.

Applicants disclose at paragraph [0050] of the present specification, that when the grafting ratio of the polar group-containing monomer is less than 0.01% by mass, there is a fear that the effect of improving the odor reduction or the freeze resistance in the storing is not sufficiently obtained or the effect of improving the loss factor and wear resistance in the rubber composition is not sufficiently obtained. Applicants further disclose that when the grafting ratio exceeds 5% by mass, the physical properties inherent to natural rubber (viscoelasticity, stress-strain curve in a tensile test or the like) is largely changed and hence the conventional methods making the best use of the physical properties inherent to natural rubber cannot be quite utilized and also there is a fear that the processability is largely deteriorated.

In this regard, as seen from the attached Rule 132 Declaration of Ms. Yonemoto, when the grafting ratio exceeds 5% by mass, the processability is largely deteriorated (i.e., Mooney viscosity increases), the ultimate strength (fracture resistance) is largely deteriorated and the crack growth resistance is largely deteriorated.

In addition, as mentioned in paragraph [0051] of the present specification, when the content of the modified natural rubber is less than 15% by mass, there is a fear that the effect of improving the loss factor and wear resistance as the rubber composition is not obtained.

In this regard, as shown in the attached declaration, when the content of the modified natural rubber is less than 15% by mass, the effect of improving the loss factor cannot be obtained.

AMENDMENT UNDER 37 C.F.R. § 1.111 Attorney Docket No.: Q91406

Application No.: 10/558,389

Thus, the presently claimed rubber composition exhibits unexpected results.

Accordingly, Weydert fails to render obvious the present claims. Withdrawal of the rejection is

respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

Thomas M. Hunter

Registration No. 64,676

SUGHRUE MION, PLLC

Telephone: (202) 293-7060 Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: August 13, 2009

10